

REMARKS

The final Office Action dated January 13, 2004 has been carefully considered. Further to the Amendment and Reply filed December 15, 2003, claims 6 and 15 have been canceled. No claims have been added. Therefore, claims 1 and 2 are now pending in the application, with claims 3, 7, and 11-14 withdrawn from consideration.

The Examiner is sincerely thanked for considering Applicants' arguments in Applicants' Amendment and Reply filed December 15, 2003.

Claim Rejections

In the Office Action, claims 1 and 2 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,147,191 to Crowther (hereinafter "Crowther"). Claim 15 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Crowther in view of the combination of U.S. Patent Nos. 3,917,768 to Abate-Daga et al. (hereinafter "Abate-Daga") and 4,671,927 to Alsop (hereinafter "Alsop"). Claim 6 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Crowther with Abate-Daga and Alsop, and further in view of U.S. Patent No. 5,524,033 to Hida et al. (hereinafter "Hida"). Applicants respectfully traverse these rejections for at least the following reasons.

Specifically, the Office Action contends that Example 2 (hereinafter "Example 2") of Crowther discloses "control elements having a width (B) of 6.5 inches (16.51 cm)," and then combines this width (B) with a value of pitch (A) as calculated (in Applicants' December 15 Amendment and Reply) at a minimum of 5.696 inch (14.47 cm), to arrive at a value of B/A^2 of 0.0789 cm^{-1} . Applicants respectfully submit that this reasoning is not correct for the following reasons.

In Applicants' December 15 Amendment and Reply, Applicants asserted that "Crowther discloses, at minimum, a fuel assembly pitch (A) of... 5.696 inch...". Applicants were merely traversing the PTO's contention that Crowther discloses a fuel assembly pitch (A) of 5.125 inches, by proving that the fuel assembly pitch (A) for the example (hereinafter "Example 1") disclosed in col. 19, lines 1-11, must be at least 5.696 inch. Applicants did not assert that, for all examples disclosed in Crowther, the fuel assembly pitch (A) is 5.696 inch.

In fact, Example 1 is incompatible with Example 2. Example 1 refers to Fig. 1 of Crowther, and Example 2 refers to Fig. 4. In both arrangements, one control element is

used for four fuel assemblies. Therefore, it is impossible for the control element width (B) to exceed fuel assembly pitch (A), because such would require a geometrically impossible overlapping of control elements. Therefore, B clearly must be less than A. However, the Office Action has imported the control element width (B) of 6.5 inches of Example 2 into Example 1, in which the fuel assembly pitch (A) may be 5.696 inch. Here, B is greater than A, which is not possible.

Therefore, Crowther (and specifically Example 2 of Crowther) fails to teach, suggest, or disclose the claimed invention. None of other cited references cures the deficiencies of Crowther. Thus, independent claim 1, and dependent claim 2, are believed to be patentable over the cited references. Withdrawal of the rejections is respectfully requested.

Conclusion

Applicants believe that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

Respectfully submitted,

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